

NATURALLY KENTUCKY

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KSNPC part of Prescribed Burning Workshop

by Joyce Bender

Motorists traveling past Fort Knox on 31W during the afternoons of February 24 and 25 might have been startled to see smoke and flames rising from Godman Airfield. Then again, perhaps they weren't surprised and considered it just another military training exercise. It was a training exercise, but the trainees were land managers, not soldiers. The Nature Conservancy's Fire Management and Research Program conducted a prescribed burning workshop at Fort Knox and nearby Otter Creek Park February 22 through March 2. The Natural Resources Branch of the Fort Knox Directorate of Public Works coordinated the workshop with assistance from the Commission's Stewardship Program and the Kentucky Chapter of The Nature Conservancy.

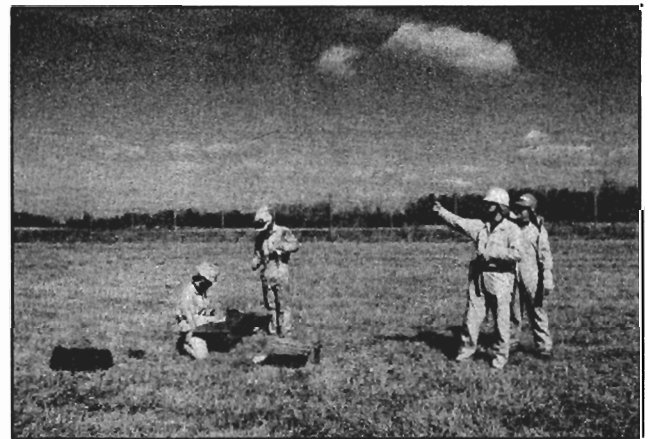
Prescribed burning is one management technique that the Commission's stewards employ to control the spread of woody

species on our barrens and glades, as well as to stimulate the growth of native species and maintain the health of natural communities that are fire-dependent. A prescribed fire is one that is set on purpose and carefully maintained by trained personnel according to a burn plan describing the conditions and limits under which the burn will be conducted. The burn plan lists narrowly defined parameters for such things as wind speed and direction, relative humidity, air temperature, and the moisture content of the material to be burned (grass, leaves, pine needles, etc.). Ecological requirements as well as management objectives are included in the burn plan.

It has been a personal goal to have a prescribed fire workshop in Kentucky. The Conservancy holds about three workshops each year in various corners of the country. After I spent six years suggesting and proposing, all the requirements finally came together. It all began as a follow-up to the 1993 limestone glade management plan submitted to Fort Knox by Commission botanist, Deborah White. In her report, Deb suggested prescribed burning as the most effective way

to restore and maintain a glade complex located on the southern end of the reservation. Shortly after receiving the report, staff from the Environmental Management Division asked me to help them burn the glades. Since none of them had ever received training in prescribed burning, I worked with them to develop their interest in hosting a workshop.

After a year and a half of planning, grant writing, and site evaluation and preparation, 35 participants descended upon Fort Knox with drip torches, pumper trucks, flappers, rakes, and radios. Dressed in bright yellow Nomex fire retardant coveralls and yellow hard hats, we formed our own rather eye-catching little



Recording weather conditions prior to lighting the fire

army. Attendees were land managers from Montana, Arizona, Arkansas, New York, Illinois, Indiana, Ohio, Florida, Michigan, Kentucky, Nebraska, South Dakota, and New Jersey.

Continued on page 2

Workshop--Cont. from page 1

The Kentucky contingent was the largest. Six staff members from Fort Knox were trained. The Kentucky Division of Forestry sent three staff members, two of whom have been assisting KSNPC with prescribed burns in their districts. The Commission's stewardship staff was present; Cindy Campbell and Kris Snyder were participants and I attended as an instructor.

The Conservancy's Fire Program sets an ambitious agenda. Participants must complete a 40-hour home study course as a prerequisite to the workshop. The eight-day agenda covers a variety of subjects that are essential to the safe and effective implementation of prescribed fire. Morning classroom instruction on such topics as fire behavior and prediction, weather, smoke management, ignition techniques, fire management planning, ecological considerations, liability issues, and safety equipment is followed with training burns in the afternoon. Burn critiques and plans for the next burn are discussed each evening. The volume of information can be overwhelming, but it is critically important to learn and master what is presented. A final exam is given, and in accordance with The Conservancy's requirements, participants are then eligible to become certified fire leaders after they complete ten additional burns.

Favorable weather conditions during the workshop enabled us to complete six burns at Godman Airfield. Eighteen burn

units have been set up at the airfield to maintain nesting habitat for the Henslow's sparrow, a candidate species under consideration for federal listing. The remaining units will be burned on a rotational schedule to ensure the availability of suitable habitat. Two additional burns were carried out at The Conservancy's Eastview Barrens preserve. Rain



Fire line along one of the burn units at Godman Airfield, Fort Knox

set in at the end of the session and teams were sent to develop burn plans for Jim Scudder State Nature Preserve, Pine Creek Barrens and Eastview Barrens. According to Ron Myers, director of the Fire Management Program, the number of burns we were able to conduct was very satisfactory for this time of the year. Paula Seamon, the assistant director, told me that our workshop ranked as one of the best she has experienced.

The smoke has long since cleared and the participants are back in their home states now, applying newly learned skills or updating their "tried and true" methods. The fires that were set at Fort Knox in February have been extinguished, but everyone in attendance brought home a little spark that will make their prescribed burn programs even more effective. ●

Blanton Forest Update

by Marc Evans

Since the last issue of *Naturally Kentucky* spring has come to Blanton Forest and the campaign to protect the forest has also blossomed. A new nonprofit organization has been formed to coordinate the effort to protect Blanton Forest. The Kentucky Natural Lands Trust, Inc. (KNLT) will take the lead on raising funds, acquiring lands, and investing and managing stewardship funds. KNLT has a broad-based board of directors including representatives from The Nature Conservancy, Kentucky State Nature Preserves Commission, and MACED and individuals with experience in environmental issues or regional economics and commerce.

Amanda Hiley, development director for the Blanton Forest project, has been incredibly busy making contacts, submitting grant proposals, organizing and speaking at fund raising events, and producing brochures. Amanda has been instrumental in turning this project into a reality. In early March first lady Elizabeth Lloyd Jones hosted a meeting of the Blanton Forest Steering Committee. Amanda presented the Blanton Forest (KNLT) promotional plan, and all in attendance were enthusiastic about the project.

By mid-May much of what has been implemented will be coming to fruition, and you will be hearing more about the Blanton Forest project. ●

KSNPC Publications

The following publications are still available in KSNPC's Scientific and Technical Series:

A Distributional Atlas of Kentucky Fishes. B.M. Burr and M.L. Warren, Jr., 1986. Price \$10.00 plus \$.60 sales tax and \$2.24 shipping

Ferns and Fern Allies of Kentucky. R. Cranfill, 1980. Price \$4.50 (10 or more \$3.50 each) plus \$.27 sales tax and \$1.50 shipping

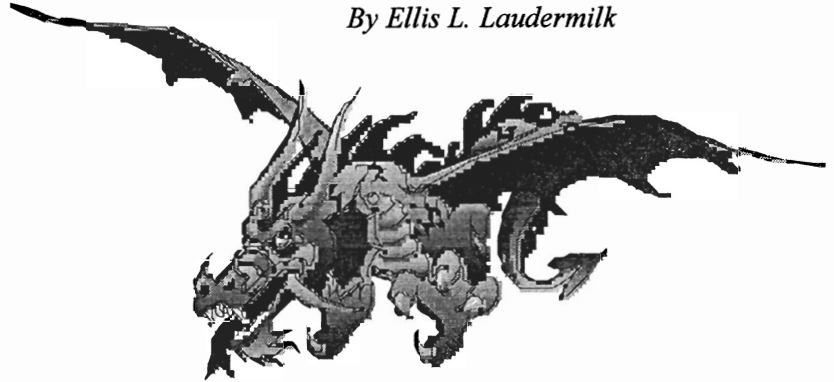
Fishes of Dix River, Kentucky. A. Branson and D.L. Batch, 1981. Price \$2.00 plus \$.12 sales tax and \$1.24 shipping

Fishes of Lower Green River Drainage, Kentucky. M.E. Retzer, B.M. Burr, and M.L. Warren, Jr., 1983. Price \$2.50 plus \$.15 sales tax and \$1.24 shipping

To purchase any of these texts, send your order and check made payable to the Kentucky State Nature Preserves Commission to 801 Schenkel Lane, Frankfort, KY 40601. Shipping costs must be paid for each book ordered to cover postage, and Kentucky residents must include sales tax for each book. Orders may be placed by phone or mail, prepaid or invoiced. For more information call Dot Marek at (502) 573-2886. ●

Dragonhunter Alert !

By Ellis L. Lauder milk



Have you ever seen a dragonhunter? What would a dragonhunter hunt these days? Actually, dragonhunters are common throughout much of Kentucky, and their prey also is abundant.

In reality, a dragonhunter (*Hagenius brevistylus*) is a dragonfly (insect), which commonly hunts and eats other dragonflies, but may also feed on mosquitoes, butterflies and moths, etc.

This efficient predator is conspicuous along streams and may be recognized by its large size (approximately 3.0-3.4 inches in length); two pairs of highly veined, membranous wings; black and yellow body markings; and green eyes on a very small head. Some of you may have called them "snake doctors" or "devils darning needles" or "mosquito hawks." They are harmless to humans, and of course, dragons.

Dragonhunters and other dragonflies are more primitive than

other insects, such as butterflies, partly because of their life cycle (only three life stages-- egg, nymph, adult). However, they are the "king of the aerial insect jungle" in terms of prey capture. When prey is detected, the speed and agility of a dragonfly in pursuit are awesome. I have witnessed the seemingly effortless capture of a swallowtail butterfly by a dragonhunter, and I can assure you that the chase was of short duration.

If you attempt to sit outdoors on a mild summer evening only to be mercilessly harassed by those pesky mosquitoes, look for a dragonfly (maybe even a dragonhunter) in action. Remember, it is working "effortlessly" to reduce your mosquito problems while providing an unequalled aerial show, and should deservedly be appreciated!

Don't be swindled into buying electronic bug killers that use blacklight fluorescent tubes to attract insects. These lights do not attract mosquitoes, but they do attract and kill many other harmless insects, such as beetles, caddisflies and moths! ●

How KSNPC selects natural areas for protection

By Robert McCance, Jr.

Part of the mission of the Kentucky State Nature Preserve Commission is to identify and acquire "natural areas that represent the best known occurrences of rare native species, natural communities, and significant natural areas." The foundational statutes of the Commission define a natural area as:

any area of land or water, or of both land and water, in public or private ownership, which either retains, or has reestablished to some degree in the judgement of the commission its natural character, though it need not be completely natural and undisturbed, or which has natural flora, fauna, biological, ecological, geological, scenic or archaeological features of scientific, aesthetic, cultural or educational interest. (KRS 146.415, Section 1)

While many sites may, in a general way, fit this definition, the Commission is mandated to preserve "areas of unusual natural significance" (KRS 146.410(1)). In order to select those areas of unique biological and ecological value, the KSNPC must first

identify sites. Initial identification of significant natural areas typically occurs during the Commission's systematized county-by-county rare species inventory. Rare species inventories completed to date have been conducted largely with grant and contract money from U. S. Fish and Wildlife Service, National Biological Service, and the federal Office of Surface Mining through Kentucky's Department for Surface Mining Reclamation and Enforcement. Other areas are reported to the Commission by other agencies, cooperative organizations, or landowners.

The Commission then uses Natural Heritage Program methodology to collect and record the site data, and it is this data that determines which natural areas (sites) will be protected. This methodology, developed by The Nature Conservancy and refined over the past 20 years, is used to varying degrees in every state. This provides KSNPC with the best decision-making system in Kentucky for evaluating the relative merits of dissimilar natural areas.

Three concepts form the core of our project selection methodology: (1) element occurrences, (2) natural heritage sites, and (3) site ranking.

1. An element can be a rare species such as grey bats, a cave beetle, an endangered orchid or sedge, or perhaps one of the rarest of Kentucky's natural plant communities.

2. A natural heritage site is an area that deserves protection action because of the type and/or concentration of elements that are known to occur in the area. Sites are ecological features that may include many tracts of land whose boundaries need careful analysis to determine what design will protect the features of concern.

A natural heritage site is an area that deserves protection action because of the . . . elements that are known to occur in the area.

3. A series of ranking procedures are used to select projects that protect the best examples of Kentucky's rarest plants, animals and natural communities.

First, the elements are ranked on two scales--their global rarity and their state rarity. Thus, highest priority is given to elements that are rare throughout the world, no matter their status in Kentucky. If there were 30 known occurrences of a plant in Kentucky, which were also the only 30 in the world, we would place their protection very high on our list--higher than a plant with only five occurrences in Kentucky if it was frequent elsewhere. The state rarity of an element is also important in that it allows us to compare the protection urgency of

dissimilar elements, such as a rare plant and a cave beetle. One of our goals is to protect the best examples of all of Kentucky's rare species despite their status elsewhere.

The second ranking procedure allows us to consider the quality of the particular occurrence of each element, so that we can select the best occurrences of each element for protection. This also allows us to select the best occurrence of a very common natural community such as an oak-hickory forest or a relatively rare community such as a limestone glade. We use a national set of standards to evaluate the quality of occurrences so that an occurrence in Kentucky can be easily compared to an occurrence in another state.

The third ranking procedure is for sites. Again, national standards are used to assure comparability among states. Each site receives four ranks-- a biodiversity rank, a protection urgency rank, a management urgency rank, and an other values rank. The four site ranks are all based on a five-point scale, with one being the most significant and five the least significant. A biodiversity rank of one (B1) would be on our high priority list for protection, but typically KSNPC will work to protect B2 and B3 sites as state nature preserves.

The data is kept in the Natural Heritage Program Database which is called the BCD-- short for Biological and Conservation Database. This database has won an award for its quality from

a computer magazine and is continually refined. The BCD allows easy access to many types of data reports and analysis. KSNPC provides data services to many users who need the information for environmental review and development planning.

Each year KSNPC conducts a "scorecard" meeting to evaluate our data, select targeted natural areas, and plan for preserve design work. Preserve designs require information from several staff members. Our biologists must determine the biological boundaries needed to protect whatever is important at the site. Stewardship staff must determine the management needs of the site and identify any problems such as hazardous materials dumps or current "public" use. Our protection specialist must collect tract ownership information and prepare the preserve design packages.

Projects that remain feasible are referred to the Commissioners for their approval, and if approved, staff attempt to acquire or otherwise protect these natural areas. Since KSNPC buys land only from willing sellers, we must work on numerous projects in order to find high quality natural areas that can be added to the state nature preserve system. In addition, the existing 30 preserves and one state natural area (totaling 10,272 acres) require an additional 16,250 acres in order to

complete their preserve designs.

The entire preserve selection process is thus based on data collected and stored by Natural Heritage Program methodology. However, any database is only as good as the data in it.

While we

have an exceptional data collection staff of botanists and zoologists and an exceptional data management staff, our flaw is the amount of information with which we have to work. We clearly have the best rare species and communities database in Kentucky, but that data is lacking much needed information. This is due to the fact that the county-level natural areas inventory is complete for only 20 counties, and another 40 counties are partially inventoried. That leaves 60 counties without any study for natural areas, and almost all counties have not had any type of organized rare species study. A county natural areas inventory costs roughly \$17,000 to \$21,000 per county and requires skilled staff. KSNPC currently is able to conduct these inventories in only a few counties per year. This year we will finish work in Todd and Christian counties and start work in Clinton and Wayne counties.

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Continued on page 8

Earth Day and every- day--the time has come to. . .

The 25th Anniversary of Earth Day is April 22. In commemoration, the staff of KSNPC urge you to enjoy your community's Earth Day festivities. Although KSNPC will not host its own extravaganza, staff will be active participants in many activities statewide.

The national theme of this memorable quarter-century celebration, chosen by Earth Day USA, is "The Time Has Come!" This is the title of a children's song written by Franko Richmond and Gail Lima, which challenges us all to "make another start."

In that spirit, KSNPC staff members have contributed Earth Day tips. **On Earth Day and every day, the time has**

come to. . .



Painted
Trillium--
grows
only in
the
Cumberland
Mountains

- ◆ Purchase environmentally friendly products. There are imposters. Read labels carefully.
- ◆ Carpool, compost, and recycle.
- ◆ Participate in your local community's environmental efforts.
- ◆ Write or call your legislators when environmental laws are being debated.
- ◆ Realize that littering and dumping harm more than the view; natural communities and habitat, groundwater and soil quality, and human health are also at risk.
- ◆ Avoid purchasing commercial pine straw for gardening. Collection of pine needles has caused damage to southeastern pine forests.
- ◆ Purchase only those plants that are certified to be from greenhouse stock. Most native terrestrial orchids, sundews, and other insectivorous plants that are being sold are collected from the wild.
- ◆ Attract hummingbirds to your yard by planting red tubular flowers.
- ◆ Fertilize and compost too by sprinkling used coffee grounds in your garden.
- ◆ Check your boat for zebra mussels before leaving or entering waterways.
- ◆ Observe posted rules on all public lands. Rules are established for your safety and that of others. If you don't understand a regulation, call the governing agency or organization for clarification.
- ◆ Remember that animals (terrestrial and aquatic) not native to Kentucky can cause considerable (sometime irreparable) damage to their surroundings when released here.
- ◆ Mow less of your lawn. Leave the edges (particularly those adjoining fences, pastures, and woodlands) unmowed to encourage wildlife habitat. On a larger scale, mow pastures in strips leaving alternating strips unmowed for a year at a time.
- ◆ Think again before using herbicides on your lawn. These kill native plants and reduce biological diversity.
- ◆ Stop abandoning cigarette butts on the trail. Smokers should carry a fireproof tin to transport butts to a proper receptacle. At a minimum, field strip your cigarettes by extinguishing tobacco underfoot and pocketing the butt.
- ◆ Plant a garden that fits your needs. If you are put off by the time and work that a traditional garden requires, why not scale down this year? Two six-foot square gardens will yield all the veggies that two to four adults can eat, and to eliminate bending, build raised beds. Mint, chives, rosemary, parsley, even tomatoes or peppers, can add a lively touch to a foundation or flower bed without adding time to your busy schedule.

♦ Enjoy nature's beauty without destroying it. Wildflowers, despite their prevalence in one area, may be state or federally threatened. A bouquet of grass pink or painted trillium, for example, may brighten your home for a day or two but would devastate that population and could seriously threaten the species. All wildflower harvesting reduces seeds and compromises future populations.

♦ Protect your backyard habitat. Put a bell on your domestic cat, or keep the cat indoors.

♦ Faithfully fill bird feeders during the winter season. The reduction of natural habitat caused by our homes and neighborhoods can be offset by supplementing the winter diets of Kentucky's native birds.

♦ Treat the planet as a loved one: nurture it; respect it; heal its wounds; live daily for its betterment; grow stronger from its gifts but never take more than you are willing to give; and do not confuse love with possession--we cannot own what was never ours. ●

**Grass Pink--
in Kentucky
known only
from one
small popu-
lation**



Stewardship News & Views

by Cindy Campbell

Spring is here and the state nature preserves (and their resident bugs) beckon us all. It's a beautiful time at the preserves. The land is greening, wildflowers are blooming, and the songs of returning migrant birds fill the air. One would like to linger and absorb as much of this dynamic unfolding as possible, but spring has additional meanings for land stewards. The first warm days herald the approach of the many visitors that are sure to come. Trails must be inspected to ensure hiker safety, directional and interpretive signs must be replaced or repaired, and rapidly growing weeds have to be removed from the trail. It's also at this time that previously constructed firebreaks are being readied in preparation for the Commission's spring prescribed burning season.

We are greatly indebted to our volunteer preserve monitors and other volunteer groups that help us to get these many tasks accomplished during this very busy time. Members of the Bluegrass Group of the Sierra Club assisted with brush removal from the power line right-of-way at Quiet Trails State Nature Preserve in Harrison County on March 18. This same day found approximately 100 volunteers removing litter from Beargrass Creek State Nature Preserve in Jefferson County during the Louisville Nature Center's Spring

Equinox Festival. On March 25, eleven students from the Human Ecology class at Lexington Community College assisted KSNPC and The Nature Conservancy (TNC) staff with brush removal and firebreak construction at TNC's Buffalo Trace preserve in Fleming County. Ten members of this class attended an April 1 workday to complete the brush removal project started previously by the Sierra Club at Quiet Trails State Nature Preserve. A special thanks to each of you who participated in these workdays.

Back at the office, stewardship staff have been busy writing management plans, interviewing candidates for summer seasonal preserve management worker positions, and tending to the many routine responsibilities (and those not-so-routine SURPRISES) involved with managing 31 state nature preserves. To further our education and expertise in our profession, we have attended several conferences, workshops, and training sessions over the past few months. By far, the most challenging and rewarding experience was our participation in the Ecological Burning Workshop (see story on page 1). We look forward to applying our new-found knowledge and skills on the fire-dependent communities located on several of the preserves.

So with our minds set like land stewards, we will purposefully make ready for your visit to your favorite state nature preserve. Be sure to find the time to enjoy the splendor and vibrancy that is unique to spring on a natural area; we will. ●

Natural Areas Selection--Continued from page 5

KSNPC has an effective system for identifying and classifying natural areas, but we currently lack the resources to find them quickly enough. Our greatest concern is that other areas like Blanton Forest will be destroyed before we even know that they exist. In 1980, Blanton Forest was a 7,000+ acre old-growth forest; today it is a 2,350-acre old-growth tract, but it is still the largest old-growth area that we have in Kentucky. In order to fulfill our mission of protecting the best known occurrences of natural areas, they must be identified, assessed, ranked, approved,

acquired, and often restored (for example the removal of exotic species such as kudzu). These tremendous undertakings form the core of the Commission's purpose--to ensure that the natural bounty and beauty enjoyed by those before us will be there for those who follow. ●

April 23-29 is National Volunteers Week.

A very large, appreciative "THANKS!" to all KSNPC volunteers

Strategic Plan Approved by KSNPC

At the quarterly meeting held March 3, 1995, the Commissioners voted unanimously to accept the Commission's first formal Strategic Plan. The plan provides an overview of Kentucky's biodiversity and physiographic regions, a history of the Commission, and the agency's current status, vision, mission, goals, procedures, and organization.

To receive a single copy of the plan, write or call Dot Marek at KSNPC.

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Kentucky State Nature Preserves Commission
801 Schenkel Lane, Frankfort, KY 40601
Tel. (502)573-2886 Fax (502)573-2355

Director
Robert McCance, Jr.

Staff
Joyce Bender
Tom Bloom
Martha S. Brent
Cynthia Campbell
Ronald Cicerello
Marc Evans
Martina Hines
Ellis Laudermilk
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Landon McKinney
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It is the mission of the Kentucky State Nature Preserves Commission to protect Kentucky's natural heritage by: (1) identifying, acquiring, and managing natural areas that represent the best known occurrences of rare native species, natural communities, and significant natural features in a statewide nature preserves system; (2) working with others to protect biological diversity; and (3) educating Kentuckians as to the value and purpose of nature preserves and biodiversity conservation.

The Kentucky State Nature Preserves Commission does not discriminate on the basis of race, color, national origin, sex, age, religion, or disability and provides, upon request, reasonable accommodations including auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in all services, programs, and activities.

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